

## Section IX

## EXTRACTION PARACHUTES AND SLING/EXTRACTION LINE PANEL

**2-24. Cargo Extraction Parachutes**

A cargo extraction parachute is placed on every low-velocity or LAPE airdrop platform load. The parachute is hooked up by Air Force personnel after the load is in the aircraft.

*a. The 15-Foot Parachute.* This extraction parachute has a 15-foot-diameter, ring-slot nylon canopy. It is also used as a drogue parachute.

*b. The 22-Foot Parachute.* This extraction parachute has a 22-foot-diameter, flat circular ring-slot nylon canopy.

*c. The 28-Foot Parachute.* This extraction parachute has a 28-foot-diameter, flat circular, ring-slot nylon canopy.

**Note: The EFTC is the only extraction system that can be used with the 28-foot parachute.**

made, the extraction parachute requirement must be determined.

*a. Low-Velocity Airdrop.* Use Table 2-8 as a guide for determining the cargo extraction parachute (and the extraction line) needed for a low-velocity airdrop platform load. Table 2-8 shows the proper extraction parachute used with the proper extraction line in the C-5 aircraft. Figure 2-14.1 also shows the C-5 aircraft extraction parachute and extraction line requirements. See Table 2-9 for the link and tie to use to connect the extraction parachute to the extraction line.

**2-25. Inspection, Maintenance, and Packing**

Cargo extraction parachutes are inspected, maintained, and packed as outlined in TM 10-1670-277/TO 13C5 series manuals. See the specific TM for more information on inspecting, maintaining, and packing these parachutes.

**2-26. Requirements**

Every rigging manual states the number and type of cargo extraction parachutes and the extraction line to be used on a particular load. However, when changes are made to an accompanying load or variations in rigging are

Table 2-8. Extraction parachute and extraction line requirements for low-velocity airdrop

**C-130 Aircraft****C-141 Aircraft**

Extracted Load Range (Pounds)	60-ft Nylon Extraction Line	Cargo Extraction Parachute	Extracted Load Range (Pounds)	Nylon Extraction Line (a)
2,520-8,500	1-loop, type XXVI	15-ft	2,520-8,000 (b)	1-loop, type XXVI, 160-ft
7,000-17,500	3-loop, type XXVI	22-ft	7,000-18,750	3-loop, type XXVI, 140-ft
14,500-30,000	3-loop, type XXVI	28-ft	17,350-32,500	3-loop, type XXVI, 140-ft
25,000-42,000	6-loop, type XXVI	Two 28-ft	30,000-42,000 (c)	6-loop, type XXVI, 120-ft

**C-5 Aircraft**

Extracted Load Range (Pounds)	Cargo Extraction Parachutes (Ring Slot)	Nylon Extraction Line Loop/Length (Feet) (d, e)	Fuselage Station (f)
2,520-10,000	15-ft	1-loop/160	1187-1971
9,500-18,750	22-ft	3-loop/140	1427-1971
9,500-18,750	22-ft	3-loop/140+60	707-1426
17,000-32,500	28-ft	3-loop/140	1427-1971
17,000-32,500	28-ft	3-loop/140+60	707-1426
30,000-42,000	Two 28-ft	6-loop/120	1667-1971
30,000-42,000	Two 28-ft	6-loop/120+60	947-1666
30,000-42,000	Two 28-ft	6-loop/120+120	947 (g)
42,000-60,000	Three 28-ft	7 1/2-inch circumference rope (200 feet in length)	

Notes: 1. All extraction lines must be packed in an extraction line bag.

2. When the extracted weight falls into the load range of two parachutes, the larger cargo extraction parachute should be used.

3. The minimum total rigged weight (includes the weight of the cargo parachutes and their riser extensions) for loads to be airdropped from C-130, C-141, or C-5 aircraft is 2,520 pounds.

(a) Must be a continuous line.

(b) Loads weighing less than 3,500 pounds must be rigged for platform extraction.

(c) The maximum load that may be extracted over the ramp of a C-130 aircraft during airdrop is 25,000 pounds for aircraft with an aircraft serial number (tail number) of 62-1783 or lower and 42,000 pounds for aircraft with a tail number of 62-1784 or higher. The maximum load that may be extracted over the ramp of a C-141 aircraft is 38,500 pounds. During contingency (wartime) operations, with Air Force approval, the maximum platform weight dropped from the C-141 may be increased to 42,000 pounds.

(d) The length of the extraction line will be determined upon positioning the load in the aircraft.

(e) When connecting extraction lines, the shortest extraction line will be attached to the extraction parachutes.

(f) The most forward fuselage station on which the aft edge of the airdrop platform shall be positioned is based on the length of the extraction line. The above limitations shall not be exceeded. The actuator arm of the EFTC must not be positioned forward of fuselage station 574.

(g) The forward fuselage station is restricted only by the position of the EFTC actuator arm.

Table 2-8. Extraction parachute and extraction line requirements for low-velocity airdrop (continued)

### C-17 Aircraft

Extracted Load Range (Pounds)	Cargo Extraction Parachutes	Nylon Extraction Line Loop/Length (Feet)
2,520-8,500	(1) 15 ft	1 loop/2 ply/160 ft
8,000-17,500	(1) 22ft	3 loop/6 ply/140 ft
17,000-30,000	(1) 28 ft	3 loop/6 ply/140 ft
27,500-42,000	(2) 28 ft	6 loop/12 ply/140 ft
42,000-60,000	(3) 28 ft	7 ½ inch circumference rope (140 feet in length)

- Notes: 1. All extraction lines must be packed in a SELB.  
 2. Only continuous extraction lines are to be used.  
 3. The EFTC is the only authorized extraction system.  
 4. A 15-foot extraction parachute is used as a drogue, with a 60-foot, (1-loop), type XXVI drogue line.

**b. Low-Velocity Airdrop Using the A/A37A-11 (LAPES) Towplate from the MC-130 Aircraft.**

Use Table 2-8.1 as a guide for determining the extraction/ drogue parachute and extraction/drogue line needed for low-velocity platform airdrop using the A/A37A (LAPES) tow plate from the MC-130 Combat Talon

aircraft. See Table 2-9 for the link and tie requirements to connect the 15-foot drogue parachute to the drogue extraction line.

*Table 2-8.1. Extraction/drogue parachute and extraction/drogue line requirements for low-velocity airdrop using the A/A37A-11 (LAPES) tow plate from the MC-130 aircraft*

EXTRACTED LOAD RANGE (Pounds)	MAIN EXTRACTION PARACHUTE	MAIN EXTRACTION LINE	DROGUE PARACHUTE	DROGUE LINE
2,520-8,500 (3)	15-ft	1-loop, type XXVI, 60-ft	15-ft	1-loop, type XXVI, 60-ft
7,000-17,500 (4,5)	22-ft	3-loop, type XXVI, 60-ft	15-ft	1-loop, type XXVI, 60-ft
14,500-30,000 (5)	28-ft	3-loop, type XXVI, 60ft	15-ft	1-loop, type XXVI, 60-ft
25,000-42,000 (6)	Two 28-ft	6-loop, type XXVI, 60-ft	15-ft	1-loop, type XXVI, 60-ft

1. Item extracted loads utilizing the EFTC during drogue only extractions will not be airdropped using the A/A37A (LAPES) tow plate system (not applicable to second or subsequent platforms during sequential airdrops).
  2. When the extracted weight falls into the load range of two parachutes, the larger extraction parachute should be used.
  3. Only one 15-foot parachute is required when the extracted weight falls between 2,520 and 8,500 pounds. The 15-foot extraction parachute will be used as both the drogue and extraction parachute.
  4. The 22-foot extraction deployment bag must be modified with bridle straps according to FM 10-542/TO 13C7-51-21, paragraph 2-13.
  5. The 22-foot and 28-foot extraction parachute and the 3-loop, type XXVI, 60-foot extraction line will be rigged according to TM 10-1670-286-20&P/TO 13C7-2-41, paragraph 2-9.
  6. Two 28-foot main extraction parachutes and the 6-loop, type XXVI, 60-foot extraction line will be rigged according to TM 10-1670-286-20&P/TO 13C7-2-41, paragraph 2-10.
- Note:** The 55-foot drogue line, NSN 1670-01-036-0724, is not required for tow plate LVAD. Omit step 4a-e of paragraph 2-10.

Table 2-9. Link and tie requirements for parachutes

**C-130, C-141, and C-5 Aircraft**

Parachute	Link	Tie
15-foot	Type IV	1 turn single of type I, ¼-inch cotton webbing
22-foot	3 ¾-inch, two-point	1 turn single of type I, ¼-inch cotton webbing
One 28-foot	5 ½-inch, two-point	1 turn double of type I, ¼-inch cotton webbing
Two 28-foot	Four-point	1 turn single, type III nylon cord

**C-17 Aircraft**

Parachute	Link	Tie
* 15-foot drogue	Type IV	1 turn single of type I, ¼-inch cotton webbing
15-foot extraction <b>Note: When used in sequential airdrop and not attached to the tow release mechanism, safety tie the two-point link with type III nylon cord.</b>	3 ¾-inch, two point	1 turn single, ½-inch tubular nylon
22-foot extraction	3 ¾-inch, two point	1 turn single, type III nylon cord
28-foot extraction	5 ½-inch, two point	1 turn single, type III nylon cord
(2) 28-foot extraction	four-point	1 turn single, ½-inch tubular nylon
(3) 28-foot extraction <b>Note: When used in sequential airdrop, replace the 9/16-inch tubular tie with a 1/2-inch tubular tie.</b>	<b>six-point</b>	1 turn single, 9/16-inch tubular nylon

\* The bag closing ties for the 15-foot drogue parachute with a 60-foot 2 ply line size will be one turn double ticket No. 5 cord. A type IV connector link may be used to connect the drogue line to the drogue parachute. Use one turn single, ¼-inch cotton webbing to secure the link to the drogue parachute. Pass the ¼-inch cotton webbing through the link and the top and bottom bag closing loops on the grommet side of the bag and secure with a surgeon's knot locking knot.

**Note: All extraction lines and drogue extraction lines must be in line bags in accordance with TM 10-1670-286-20&P.**

c. **LAPE Airdrop.** Use Table 2-10 as a guide for determining the cargo extraction parachute

needed for LAPE airdrop platform load.

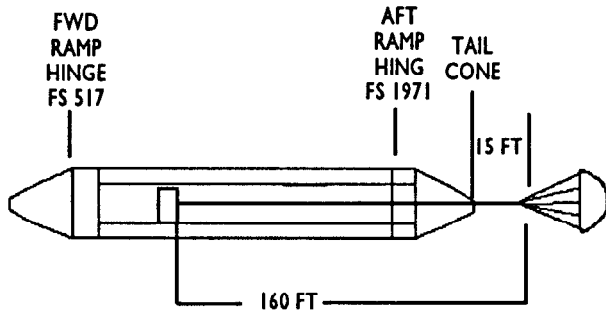
Table 2-10. Extraction parachute requirements for LAPE airdrop

Rigged Weight (pounds)	28-Foot Cargo Extraction Parachutes	35-Foot Cargo Extraction Parachutes	*60-Foot, Type XXVI Nylon Webbing Extraction Line
6,700-13,300	1	NA	3-loop
11,700-23,300	2	NA	6-loop
16,600-37,175	3	NA	6-loop
31,500-42,000	NA	2	7-inch circumference rope

Notes 1. All LAPE airdrop loads use a 15-foot cargo extraction parachute as a drogue parachute.

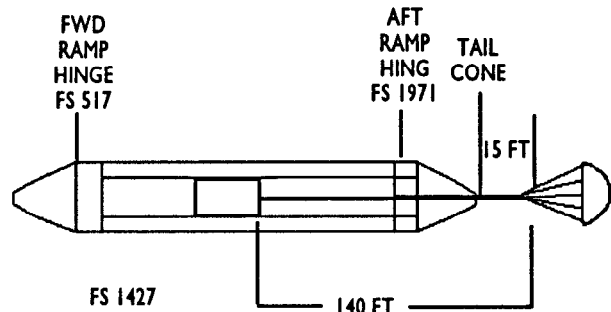
2. All 28-foot cargo extraction parachutes used on LAPE airdrop loads must be packed for LAPE airdrop as outlined in TM 10-1670-277-23&P/TO 13C5-28-2.

\* All extraction lines must be packed in an extraction line bag including the drogue extraction parachute line.



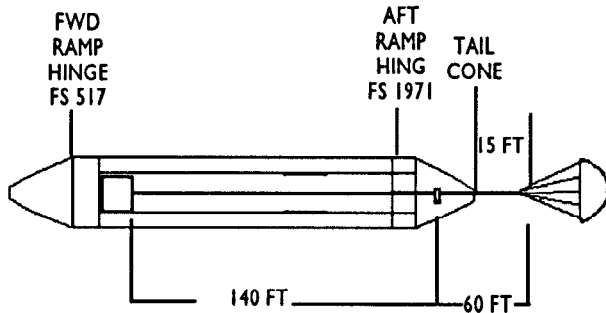
FS 1187

15-Foot Extraction Parachute  
With a 160-Foot, 1-Loop Extraction Line



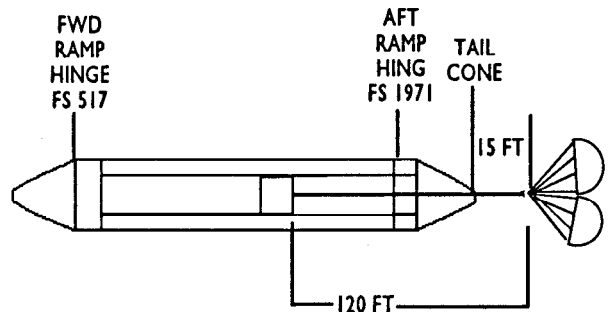
FS 1427

22- or 28-Foot Extraction Parachute  
With a 140-Foot, 3-Loop Extraction Line



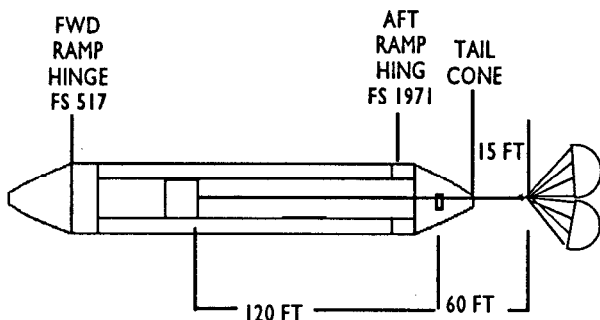
FS 707

22- or 28-Foot Extraction Parachute With  
60- and 140-Foot, 3-Loop Extraction Lines



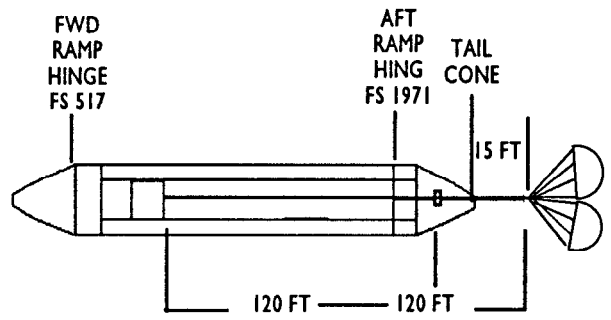
FS 1667

Two 28-Foot Extraction Parachutes With  
a 120-Foot, 6-Loop Extraction Line



FS 947

Two 28-Foot Extraction Parachutes With  
60- and 120-Foot, 6-Loop Extraction Lines



FS 846

Two 28-Foot Extraction Parachutes With  
Two 120-Foot, 6-Loop Extraction Lines

Figure 2-14.1. C-5 aircraft extraction parachute and extraction line requirements

### 2-27. Sling/Extraction Line Panel

The sling/extraction line panel, as shown in Figures 2-15 and 2-16, is used to store and deploy the extraction lines and suspension slings. Stow the different extraction lines in the sling/extraction line bag according to TM 10-1670-286-20/TO 13C5-2-41.

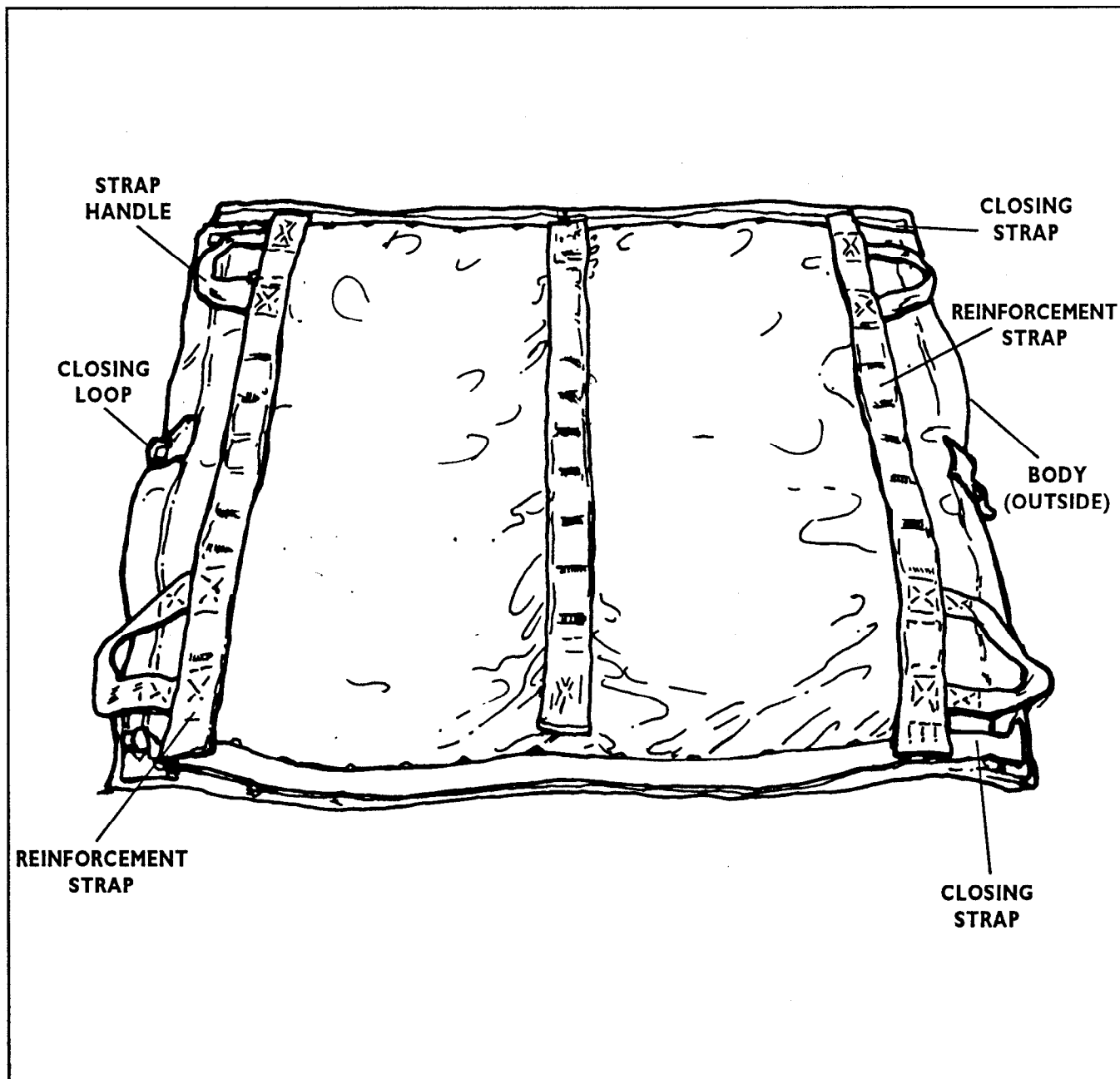


Figure 2-15. Outside view of the sling/extraction line panel



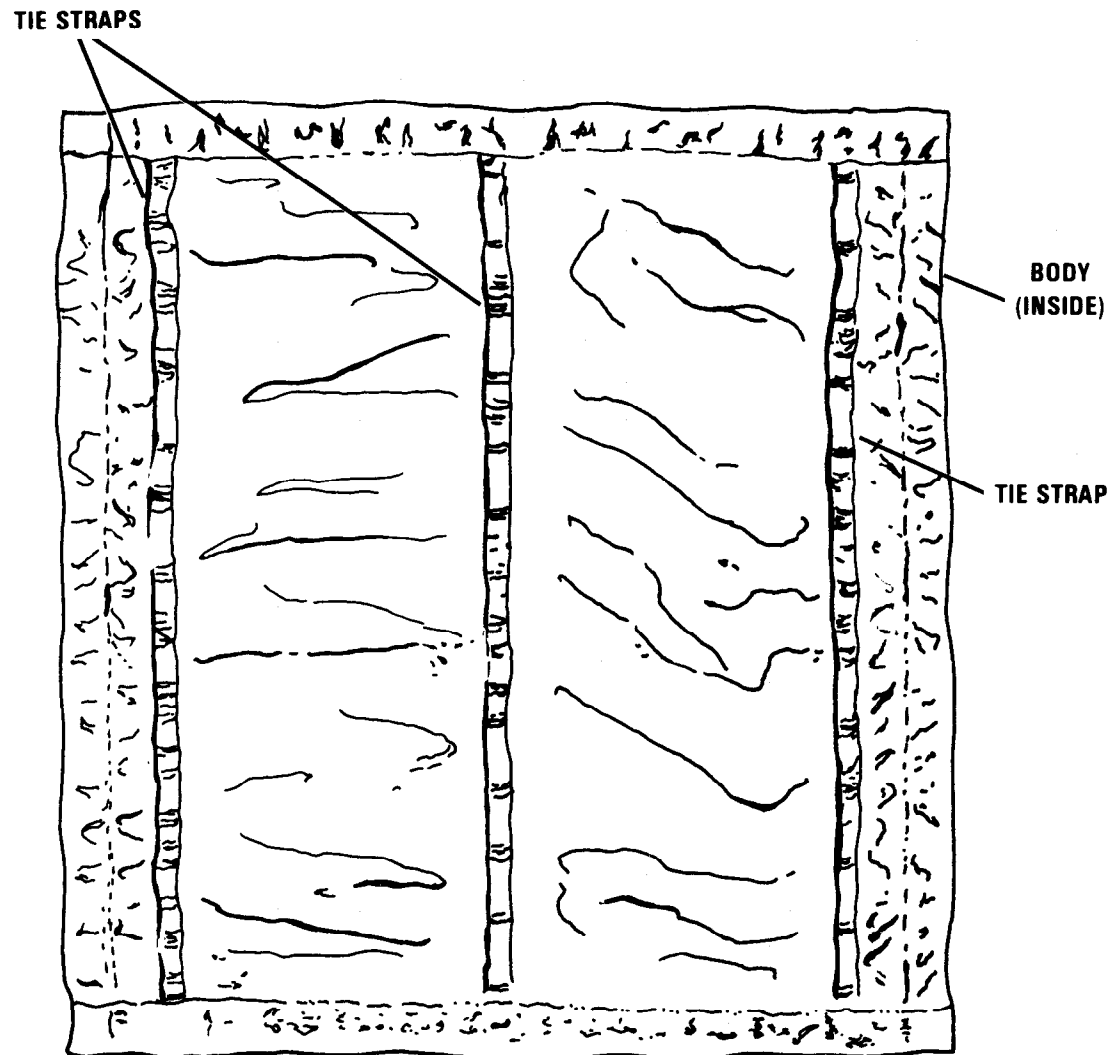


Figure 2-16. Inside view of the sling/extraction line panel